

October 20, 2011

VIA EMAIL (RCRA-docket@epa.gov) AND HAND DELIVERY

OSWER Docket, EPA Docket Center, Mail Code 28221T  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington DC 20460  
Attn: Docket ID No. EPA-HQ-RCRA 2010-0742

Re: U.S. EPA Proposed Rule, "Revisions to the Definition of Solid Waste", 76 FR 44094 (July 22, 2011) – Comments of the Vanadium Producers and Reclaimers Association

Dear Sir or Madam:

On behalf of the Vanadium Producers and Reclaimers Association ("VPRA"), I am submitting the following comments on EPA's proposal to revise the definition of solid waste ("DSW") regulations under the Resource Conservation and Recovery Act ("RCRA") to exclude certain types of hazardous secondary materials sent for reclamation set forth in the above Federal Register notice (hereafter the "Proposal"). In particular, VPRA is most concerned with how the Proposal will impact the regulatory standards for reclamation of spent refinery hydroprocessing catalysts—specifically, spent hydrotreating catalyst (K171) and spent hydrotreating catalyst (K172) (collectively "spent catalyst"), listed hazardous wastes under RCRA. Although VPRA is generally supportive of efforts to streamline unnecessary regulatory burdens associated with proper and legitimate reclamation of spent catalyst by capable and responsible reclaimers, it believes that such streamlining would best be achieved through a *specific conditional exclusion* for spent catalyst which is tailored to the unique nature and characteristics of these materials, rather than through generic DSW exclusions designed for hazardous secondary materials that do not exhibit these same unique properties. VPRA has been working with EPA staff on the development of such a specific conditional exclusion for spent catalyst for the last several years, and believes that such an exclusion could be finalized in short order. See, e.g., March 9, 2006 Letter from VPRA to M. Hale, U.S. EPA re. Conditional Exclusion for Spent Catalyst.

VPRA is a trade association comprised of companies producing vanadium compounds and reclaiming vanadium compounds from secondary materials. The proposed changes to the DSW rules set forth in the Proposal, if adopted, will directly affect the members of VPRA. Certain members produce vanadium from hazardous secondary materials. Others recycle vanadium containing hazardous wastes, including spent refinery hydroprocessing catalysts, to produce vanadium oxides and other products. Revision of the generic DSW exclusions to encompass spent catalysts when reclaimed as set forth in the Proposal would have a direct and significant impact on the operations of VPRA members. EPA has recognized that spent catalysts may exhibit pyrophoric and self-heating properties. As reclaimers of spent catalysts, VPRA members have consistently sought to insure that such materials are properly containerized, stored, transported, handled and managed in accordance with adequate safeguards when shipped to their facilities for recycling. Inclusion of spent catalysts within the proposed generic DSW exclusions for hazardous secondary materials sent for reclamation, which are not tailored to the unique properties of spent catalysts, potentially could undermine these goals. Such proposed changes could also affect the manner and cost of materials management by the companies that generate the vanadium-containing materials supplied to VPRA members, and create disincentives for legitimate reclamation of spent catalysts.

**VPRA supports EPA's commitment to encourage recycling and reuse.**

When EPA published its supplemental proposal for changes to the DSW rules on March 26, 2007, it stated that the purpose of its proposal was "to encourage safe, environmentally sound recycling and resource conservation...." (72 FR 14172). This goal is reiterated in the current Proposal, wherein EPA states the purpose of the proposed revisions is to "ensure that the recycling regulations, as implemented, encourage reclamation in a way that does not result in increased risk to human health and the environment from discarded hazardous secondary materials." (76 FR 44094).

VPRA members are interested in the safe, environmentally sound recycling of spent hydroprocessing catalyst -- currently RCRA listed hazardous wastes K171 and K172. VPRA has repeatedly urged EPA to adopt measures that would safely encourage refiners to choose legitimate recycling as the preferred method of spent catalyst management, demonstrating that metals recovery saves valuable and strategic resources and avoids not only land disposal of the hazardous spent catalyst itself, but also millions of tons of waste generated in the mining and refining of vanadium ores. *See, for example*, Petition for Rulemaking and Supplement, RCRA Docket 2003-0023, Documents 0005 and 0006; Comments of the Ferroalloys Association on the Proposed Gasifier Rule (September 10, 2002), Docket RCRA-2002-0002; Comments of VPRA on the proposed Teris Delisting (November 6, 2003), Region VI Docket F-03-ARDEL-TERIS; Comments of VPRA on Proposed Motiva Delisting (April 30, 2003), Louisiana DEQ Log No. HW079P; VPRA Comments on Revisions to the Definition of Solid Waste (February 24, 2004) (RCRA Docket 2002-0031, Document 0144); Letter to Matt Hale (March 9, 2006) providing the basis and specifics for a Conditional Exclusion for Spent Catalyst (attached as Exhibit A); and VPRA comments on the Supplemental Proposed Rule on Revisions to the Definition of Solid Waste (March 27, 2007) (RCRA Docket 2002-0031 Document 0475).

VPRA is in favor of changes that promote the goal of materials recovery from spent catalyst rather than disposal, provided that proper hazardous material management safeguards are maintained. The undisputed objectives of this regulation should be to (1) ensure safe spent catalyst management, and (2) avoid unnecessary regulatory burdens that would deter legitimate reclamation. VPRA's long-standing proposal for a specific conditional exclusion for spent catalyst reclamation would achieve these objectives.

When EPA adopted the generic exclusions for certain types of hazardous secondary materials from the definition of solid waste (DSW) on October 30, 2008 (73 FR 64688), EPA specifically carved out spent catalyst (K171/K172) from these generic exclusions, and stating that:

EPA is planning to propose—in a separate rulemaking from today's final rule—to amend its hazardous waste regulations to conditionally exclude from the definition of solid waste spent hydrotreating and hydrorefining catalysts generated in the petroleum refining industry when these hazardous secondary materials are reclaimed (*see entry in the Introduction to the Fall 2007 Regulatory Plan, 72 FR 69940, December 10, 2007*)....

73 FR at 64714. The reason that EPA decided not to include spent catalyst within the scope of the generic DSW exclusions was precisely in order to consider the need for specific conditions to address the unique properties of spent catalysts not shared by other hazardous secondary materials:

It is largely because of these pyrophoric properties that EPA is considering a separate proposal to conditionally exempt these catalysts from hazardous waste regulation. This future proposal will allow the agency to consider and seek comment on specific conditions to address the pyrophoric properties of these hazardous secondary materials, particularly during transportation and storage prior to reclamation, in order for the Agency to determine that they are not being discarded. As a result of this separate effort, these spent catalysts will not be eligible for today's exclusions.

Id.

For the reasons set forth below, VPRA believes:

1. EPA should not include spent catalyst within the scope of the proposed generic exclusions in the DSW Proposal, and instead should proceed as planned to adopt a specific conditional exclusion for spent catalyst (K171/K172). A specific conditional exclusion would be tailored to the unique properties of spent catalyst and ensure safe management of these hazardous materials. A uniform and consistent set of specific conditions would then apply to both reclamation under the control of the generator and to third party reclaimers. In addition, a specific conditional exclusion, as VPRA proposed, would avoid unnecessary regulatory burdens both to the refiner and to the reclaimer

while incentivizing legitimate reclamation - potentially negating the difference between choosing a landfill versus reclamation in times of low metals prices.

2. EPA should adopt the proposed rule change mandating all four of the legitimacy factors when determining whether a recycling activity is legitimate and not a "sham." Furthermore, VPRA agrees that the analysis of these factors should be documented and available for public review.
3. EPA should adopt the proposed "partial reclamation variance" procedures requiring all five criteria to be addressed. This change would be a positive step towards reducing sham recycling and the use of inappropriate variance procedures. While VPRA supports this change to the rule as it applies to many wastes, as stated in #1 above, VPRA believes spent catalyst, given its unique properties, should have its own specific conditional exclusion, which would eliminate the potential for inconsistent regulations and inappropriate variances being issued. EPA should require a detailed storage and containment analysis as part of any variance procedure. The variance should include specific containment and storage requirements that address the fundamental basis for listing a waste as a hazardous waste.
4. EPA should adopt a more specific definition of "contained" and a clearer definition of storage requirements. However, VPRA believes that the unique properties of spent catalyst (self heating, pyrophoric, reactive, presence of benzene and other volatile organics) require specific storage requirements best addressed in a specific conditional exclusion written for spent catalyst. If EPA were to include spent catalyst within the generic DSW exclusions as proposed, then it is critical that EPA establish uniform containment standards for both generator-controlled and transferred reclamation. Furthermore, EPA must include detailed language requiring that storage and containment specifically address spent catalyst's pyrophoric, reactive and self-heating properties, and its benzene emissions. The simple statement in the Proposal's definition of "contained" (40 CFR § 260.10) that the unit "addresses any potential risks of fires" is not sufficient to adequately address this very specific and unique hazard of spent catalysts.
5. The proposed one-year accumulation period for transferred reclamation should not apply to spent catalyst. Aside from the unique hazardous properties of spent catalyst which would make it significantly more difficult to safely accumulate such material for up to one year, the underlying rationale for this proposed change - "in order to allow generators time to accumulate enough hazardous recyclable material to make reclamation more economical" - does not apply to the generation of spent catalysts. If spent catalysts were eligible for the one-year accumulation period, then EPA should adopt an upper limit on the amount of such material that can be accumulated beyond 90 days to no more than one or two truckloads, or use a mass limit such as a maximum of 40,000 or 80,000 lbs.
6. If EPA were to include spent catalyst within the proposed generic DSW exclusions, EPA must address the specific conditions applicable to the management and reclamation of spent catalyst, and apply them to everyone reclaiming spent catalyst. EPA's proposed

dual system of regulation -- where spent catalyst under control of the generator (onsite or offsite) would have minimal conditions applied, while third party reclaimers would basically have to meet full current RCRA requirements -- makes no sense. There is no fundamental difference between spent catalysts managed "under the control of the generator" (whether processed on site or off site, or whether managed directly by the generator, by a third party contractor or tolling contractor) and spent catalyst transferred for reclamation. Specific conditions beyond simple storage requirements are required to ensure the safe and proper reclamation of spent catalyst in either case (e.g. requiring metals recovery not just oil removal, proper transportation safeguards, proper management under the Clean Air Act and other specific conditions outlined in VPRA's original request for a conditional exclusion. *See Attachment A*).

**EPA should adopt a specific exclusion for spent catalyst rather than including spent catalyst within the proposed generic DSW exclusions.**

VPRA has worked with the EPA for over ten years in an attempt to develop a consistent set of rules that would provide an incentive to fully reclaim spent catalyst with sufficient, specific controls to prevent sham recycling and undue risk of environmental damage. In its Petition for Rulemaking (RCRA Docket 2003-0023, Documents 0005 and 0006) and subsequent letter to Matt Hale (March 9, 2006) supplementing the Petition, VPRA provided the basis for correcting the current LDRs for K171/K172 and for a conditional exclusion for spent catalyst. Furthermore, in its comments on the DSW rule (2003 and 2007), VPRA presented the technical and economic basis for not including spent catalyst in the general DSW rule exclusions for hazardous secondary materials and for adopting a conditional exclusion specific to spent catalyst instead.

In response to VPRA's petition and request for a specific conditional exclusion, EPA reportedly developed a proposed rule revision that would incorporate a specific exclusion for reclaiming spent catalyst under certain conditions. This approach is easily justified and presumably EPA can follow through and finalize the specific exclusion with little cost or difficulty. As indicated above, it was partly on this basis that EPA excluded spent catalyst reclamation from the scope of the 2008 DSW final rule generic exclusions.

This Proposal would reverse course by lumping in spent catalyst reclamation with all other hazardous secondary materials reclamation -- which would require RCRA regulation for spent catalyst sent to a third party reclaimer and essentially no regulation for catalyst reclaimed "under the control of the generator". VPRA believes this would be a mistake because it would unnecessarily deter reclamation by third parties in low metal market conditions and encourage unsafe transport of spent catalyst and incomplete reclamation under the control of the generating company. Here are a few reasons why EPA should not include spent catalyst within the proposed generic DSW exclusions for hazardous secondary materials, and proceed instead with its rulemaking to adopt a specific exclusion for spent catalyst reclamation.

- In the K171/K172 listing proceeding, EPA specifically evaluated the unique risks of spent catalyst management and found that strict regulation is needed to prevent safety and environmental problems. Numerous examples show that mismanagement (even at

RCRA permitted facilities) can cause fires, the release of toxic metals, and other damage. Spent catalyst is a specialized material: very few companies are experienced with its properties and risks. Twenty years of RCRA regulation of spent catalyst has resulted in the development of a small cadre of qualified companies and personnel with the necessary experience and expertise to safely and properly reclaim spent catalyst. This has resulted in a record of safe, predictable management. EPA should not unravel this protective environment, even for so-called reclamation under the control of the generator, at least without careful study of the specific increase in risk. VPRA's proposal for a specific conditional exclusion, which would apply to everyone engaged in spent catalyst reclamation - generators, on-site reclaimers, off-site reclaimers and transporters -, retains the essential requirements for safe transportation and storage, while streamlining unnecessary regulatory burdens to save excess costs where appropriate.

- EPA's economic study supporting the 2008 DSW rulemaking shows that volatile prices (as with global metal markets) can create an incentive to mismanage recyclable materials. Attached as Exhibit B is a chart of vanadium, molybdenum and nickel prices over 25+ years. The chart tracks recyclers' revenue from sale of metals reclaimed from spent catalyst. These are world market prices, over which recyclers have absolutely no control. Most contracts with refiners are based on a "formula price", such that in high metal markets the refiner gets a share of the sale price of the reclaimed metals and in low metals markets, the refiner pays a treatment fee. Experience shows that in low metal markets refiners treat spent catalyst as a waste, and discard it, often to landfills, which can be cheaper than the recyclers' treatment fee.

The current Proposal could actually discourage reclamation and "push" refiners which currently use third party reclamation facilities to switch to landfills for disposal of spent catalyst during low metals markets. The current Proposal basically maintains full RCRA requirements for transferred hazardous materials for reclamation (the alternative Subtitle C approach provides only minimal changes) and thus does not provide the cost savings that could occur under a specific conditional exclusion tailored to spent catalyst. A specific conditional exclusion would create uniform and consistent regulatory standards applicable to everyone - both generator controlled and third party reclamation - and promote reclamation over landfill disposal when coupled with the LDR revisions in the VPRA Petition.

Specifically, VPRA proposed to exempt spent catalyst sent for reclamation from hazardous waste regulation under certain conditions including some RCRA-based standards, such as storage and training provided a detailed definition of full reclamation of spent catalyst, set out special record keeping and notification provisions, required shipping under DOT standards and prohibited export except as a hazardous waste. Cost savings would come from: elimination of RCRA permitting, not shipping as a hazardous waste, elimination of the "derived-from" rule and reduced record keeping requirements. See Exhibit A.

- A specific rule for spent catalyst is consistent with a recent case from the DC Circuit on the subject of conditional exclusions for recycling (*Safe Food and Fertilizer v. EPA*, 350 F.3d 1263 (D.C. Cir. 2003)) which approved EPA's approach tailoring an exclusion to the specific risks presented by an individual waste stream.

In the current Proposal, EPA proposes to include spent catalyst within the generic DSW exclusions for reclaimed hazardous secondary materials and proposes a dual system of regulation, one for spent catalyst reclaimed under control of the generator (onsite or offsite) with minimal conditions applied, and another for third party reclaimers subject to full current RCRA requirements. This double standard approach to regulation (i.e. generator-controlled reclamation versus transferred third party reclamation) makes no sense in the case of spent catalyst reclamation. The risk of catching fire due to mishandling, for example, is there regardless of whether the reclamation takes place under the generator's control or after transfer to a third party. In addition, the incentive for legitimate reclamation of spent catalyst turns mainly on the market price of the contained metals, not on who is "in control" of the process. And the suggested bifurcated regulatory system would encourage "gaming the system" to achieve non-regulated status, as discussed below.

For generators who choose to maintain control of the reclamation process, the Proposal does not address many of the specific issues that would be addressed in a specific conditional exclusion. While EPA has improved the storage requirements (contained standards and requirements), several other issues specific to spent catalyst management are not addressed such as: requirements for full reclamation of the metals and removal of reactive properties of the material; proper shipping requirements under DOT regulations for pyrophoric and reactive material; short accumulations periods to avoid speculation based on fluctuating metals prices, and compliance with benzene NESHAPS regulations. These issues were included in VPRA's 2006 letter to Matt Hale describing the basis for a specific exclusion.

A dual regulatory approach would allow a refiner to set up a separate facility under its control many miles from its refineries and ship spent catalyst from multiple locations to a reclamation site that would not necessarily have all of the protections that might be expected at a full refinery operation. In such a case, spent catalyst, which when "transferred for reclamation" to a third party would be subject to Subtitle C-like requirements, could be shipped and handled under much less restrictive conditions established for "generator controlled reclamation" under the generic DSW exclusions. This approach could result in increased environmental risk and is counter to EPA's stated purpose to "ensure that the recycling regulations, as implemented, encourage reclamation in a way that does not result in increased risk to human health and the environment from discarded hazardous secondary materials." (76 FR 44004). As an example, in the past before spent catalyst was a listed hazardous waste, some generators (or their third party contractors) conveniently forgot that spent catalyst needs special shipping. Under the Proposal, there is no specific discussion of the special concerns related to spent catalyst that led to the original listing. By contrast, VPRA's specific conditional exclusion language states that DOT requirements for pyrophoric, self heating, and reactive materials must be followed as these properties are the fundamental reasons why spent catalyst was listed as a hazardous waste.

A spent catalyst specific conditional exclusion would apply to all spent catalyst reclamation whether "generator-controlled" or "transferred for reclamation" and would ensure that the proper management techniques apply to all reclamation activities, based upon careful Agency consideration of spent catalyst properties and management history.

In addition, EPA's Proposal to include spent catalyst within the generic DSW exclusions could legitimize limited processing which does not satisfy the requirements for complete reclamation. For instance, some refiners could process spent catalyst through a thermal desorber simply to remove the oil. If the oil is collected, such as might be done "at a generator controlled reclamation site" this could be construed as exempt recycling, even though the remaining material will have virtually all the ignitable/reactive and toxic properties as the original material generated by the refiner. Moreover, nearly all of the valuable materials would remain in the spent catalyst, defeating RCRA's fundamental goal of "resource conservation and recovery." See VPRA Comments on Proposed Motiva Delisting, *above*.

VPRA carefully defined recycling for spent catalyst in its proposed specific conditional exclusion. It is very important that clear, comprehensive and uniform criteria be established for the spent catalyst recycling process. History has shown that "sham" recyclers will operate in any market where there is money to be made by skirting the rules. The end result is often significant environmental damage and a significant cost to the public. VPRA's proposal for a specific conditional exclusion specifically requires the reclamation process to recover valuable metals present in the spent catalyst. This condition is needed to ensure that true reclamation is being performed and not just simple oil recovery with the valuable metals being wasted to landfills. For spent catalyst reclamation it is very important that the recycling process be an established process that both adequately manages all of the hazardous properties of the secondary material and recovers the contained metals as valuable commodities.

### **Specific Comments on Other Aspects of the Proposal**

#### **Comments on Changes to "legitimate recycling."**

The Proposal would tighten the definition and application of the requirement for recycling to be "legitimate" and not "sham". See 76 FR 44117 *et seq.*, X. Revisions to the Definition of Legitimacy. Previous VPRA comments on the DSW rule supported making all four of the legitimacy criteria mandatory; VPRA continues to support this with respect to all hazardous waste recycling. VPRA also supports a requirement that the analysis of these factors and determination of legitimacy be documented and available for review.

#### **Solid waste variances and Non-waste determinations. See 76 FR 44126 *et seq.***

VPRA strongly supports any steps taken to ensure national consistency of variances and non-waste determinations. EPA's Proposal would change the "partial reclamation variance" procedures to require that each of the five criteria (the sixth criteria, "other factors" is removed) be specifically addressed and answered as part of the variance review process. Further, the



Proposal would require (1) facilities to re-apply for a variance in the event of a changed circumstance that affects how a material meets the five criteria, and (2) re-notification every two years. VPRA supports these changes as positive steps to reducing "sham" recycling and the inappropriate use of the variance procedure.

Any variance procedure that includes subjective decisions can result in inconsistent regulatory decisions between the EPA Regions and the authorized states. Accordingly, VPRA believes EPA should adopt a specific conditional exclusion for spent catalyst management that would eliminate the potential for inconsistent regulations from region to region or state to state. However, in the absence of a specific conditional exclusion, the proposed clarifications and changes to the partial reclamation variance criteria language is a positive step forward. Further, EPA should require that a detailed storage and containment analysis be part of any variance procedure. The variance should include specific containment and storage requirements that address the fundamental basis used for listing a waste as a hazardous waste. VPRA also supports increasing transparency by making all variances and non-waste determinations available on-line.

**Definition of "contained."** See 76 FR 44113.

When reclamation is under the control of the generator, the Proposal requires that hazardous materials be "contained" to prevent releases to the environment. EPA is proposing to revise the definition of "contained" so that it is more specific and relates closely to the existing RCRA standards. Proper storage and containment is a fundamental environmental protection for all secondary hazardous materials and the current rule is very non-specific and open to a wide variety of interpretations. In its comments when the current DWS rule was being proposed, VPRA strongly recommended "that EPA adopt the basic RCRA storage requirements as the guidelines for proper storage and containment of hazardous secondary materials qualifying for this conditional exclusion. The secondary hazardous materials that would qualify for this exclusion, by definition have already been determined to be hazardous and, if not excluded, they are considered hazardous waste. Therefore, these hazardous materials require some type of special management or they would not be subject to the hazardous waste rules." (See VPRA comments - RCRA Docket 2002-0031 Document 0475).

VPRA supports the proposed change to more clearly define the storage requirements for all secondary hazardous materials. Further, if EPA moves forward with the dual approach to regulation - different requirements for materials reclaimed under the generator's control versus material transferred for reclamation, it imperative that more specific storage and containment requirements be included in the revised rule. The proper management of a hazardous material is not different whether the material is being handled at a generator site, a generator controlled off site location, or an actual third party facility. If it is a hazardous secondary material, then it must be properly managed and controlled.

Further, if the spent catalyst exclusion is included within the scope of the generic DSW exclusions as proposed, it is even more critical that the "contained" standard be clearly delineated. The simple statement in the Proposal's definition of "contained" (Prop. 40 CFR § 260.10) requiring that the unit "addresses any potential risks of fires" is not sufficient to adequately address this very specific and unique hazard of spent catalysts. Spent catalyst has

unique properties including being potentially pyrophoric, as noted by EPA, but also can contain reactive sulfides and benzene, in addition to the oil and metals. The potential for environmental damage or release from these properties are not always recognized by those who are not intimately familiar with spent catalyst. This can lead to mismanagement of the material either during storage (on site at a generator or off site "under generator control") and during transport between facilities. A third party reclaimer operating under the "alternative Subtitle C" storage standard also may not recognize the unique properties of spent catalyst. The Proposal itself states that spent catalysts "can ignite spontaneously in contact with air", and notes that "the risk of these hazardous secondary materials spontaneously igniting when in contact with air is not a property that most metal recyclers would be expected to address". 76 FR at 44141. In this case, while the some of the properties of spent catalyst, such as containing oil, may be addressed under the improved "contained" definition, the potential for self-heating, the reactive nature of the sulfides, and the presence of benzene are not otherwise properly addressed.

Consequently, it is more appropriate for EPA to establish specific "contained" standards tailored for the particular properties of spent catalysts in a specific conditional exclusion rather than including spent catalysts within the scope of the generic DSW exclusions set forth in the Proposal. A specific exclusion would establish clear and uniform containment standards for spent catalysts that would apply regardless of whether reclamation occurs under generator control or after transfer to a third party. The Proposal is less than clear on this point. For example, footnote 54 states that "spent catalysts would be eligible for the alternative Subtitle C regulations" applicable to hazardous recyclable materials that are transferred for legitimate reclamation, but then notes that "EPA is also proposing to add a regulatory definition of the 'contained' standard which includes a requirement to address the risk of fires and explosions." 76 FR at 44141. However, as proposed, the new "contained" standard would be applicable only to hazardous secondary materials reclaimed under the control of the generator, but not to hazardous recyclable materials transferred for reclamation. A specific conditional exclusion would avoid such regulatory inconsistencies.

#### **Generator accumulation of hazardous secondary materials up to one year.**

The Proposal would allow generators to store material destined for reclamation for up to one year before shipment, so long as they meet the RCRA standards for hazardous waste storage, etc. EPA justifies this relaxation of the 90 day storage limit on the grounds that there are generators who are not able to send material to reclaimers because "they cannot accumulate enough hazardous waste during the generator accumulation time limits to make such recycling economically viable." See 76 FR 44110. This rationale clearly does not apply to the spent catalyst reclaiming business as spent catalyst is typically removed from service in larger quantities. Refiners should not be allowed to interrupt the free flow of raw material sent to reclaimers because refiners want to hold the material for some reason, such as timing the market.

EPA has asked for comment on placing an upper limit on the amount of material a generator may accumulate at any one time. VPRA supports such a restriction as accumulating more than one or two truckloads of material cannot appear to be justified except for speculative purposes. VPRA supports the establishment of an upper limit, preferably at no more than one or two truckloads

(or a mass limit such as a maximum of 40,000 or 80,000 lbs.) of material. Any accumulation over 90 days should be subject to an appropriate accumulation upper limit.

**Material reclaimed “under the control of the generator.”**

EPA has consistently acknowledged the unique risks to the environment caused by spent catalyst's unique properties. Due to these risks, EPA did not include spent catalyst within the generic DSW exclusions established by the 2008 DSW final rule. In the Proposal, EPA considers reversing course by proposing to include spent catalyst within the generic DSW exclusions and establishing a dual system of regulation — one for spent catalyst reclaimed under control of the generator (onsite or offsite) which would be subject to minimal regulatory safeguards, and another for third party reclaimers subject to essentially full current RCRA requirements. This double standard (i.e. generator-controlled reclamation versus transferred to third party reclamation) approach to regulation is not justified for spent catalyst reclamation: the risk of catching fire due to mishandling for example, remains regardless of who is in charge of the operation. The incentive for legitimate reclamation of spent catalyst turns mainly on the market price of the contained metals, not on who is “in control” of the process. The suggested bifurcated regulatory system would encourage gaming the system by refiners to achieve non-regulated status.

For generators who choose to maintain control of the reclamation process, the Proposal fails to address many of the specific issues that would be addressed in a specific spent catalyst conditional exclusion. While EPA proposes to improve the storage requirements (“contained” standards), several other issues specific to spent catalyst management are not addressed, such as: requirements for full reclamation of the metals and removal of material's reactive properties; proper shipping requirements under DOT regulations for pyrophoric and reactive material; short accumulation periods to avoid speculation based on fluctuating metals prices; and, compliance with benzene NESHAPS regulations. These issues were included VPRA's 2006 letter to Matt Hale describing the basis for a specific exclusion (see Attachment A).

Over the years, generators of spent catalyst have attempted to claim various types of recycling exclusions, many of which did not address any specific management safeguards needed to minimize potential risks to the environment. In some cases, these attempts to exclude spent catalyst from the hazardous waste rules portrayed spent catalyst as “simply another oil bearing waste” similar to oily sludges and generic byproducts of the refining process. An example is the lumping of spent catalyst under the existing exclusion for oil bearing hazardous refinery residuals. (See VPRA Comments on Revisions to the Definition of Solid Waste (February 24, 2004) (RCRA Docket 2002-0031, Document 0144). Another example is the generator variance request based merely on simple, partial reclamation of spent catalyst for oil recovery only (and no metals recovery). See Comments of VPRA on Proposed Motiva Delisting (April 30, 2003) Louisiana DEQ Log No. HW079P. These repeated attempts by some generators to deregulate spent catalyst without regard to its environmental risks demonstrate that some generators have no more knowledge or concern of spent catalyst's unique properties and the proper management methods needed to safely handle this material than the third party companies which have

attempted to obtain an exclusion, variance or delisting of partially-reclaimed spent catalyst residuals. *See* Comments of VPRA on the proposed Teris Delisting (November 6, 2003), Region VI Docket F-03-ARDEL-TERIS. These examples and the history of spent catalyst management and mismanagement demonstrate that both generators and third party reclaimers should be held to the same standards for the proper management of spent catalyst.

Should EPA decide to include spent catalyst within the generic DSW rule exclusions, as currently proposed, then it is imperative that EPA also address in the proposed rule the specific conditions and safeguards necessary for the proper management and reclamation of spent catalyst. Specific conditions beyond simple, generic storage requirements are needed to ensure: (i) proper and legitimate reclamation (e.g. requiring metals recovery not just oil removal); (ii) proper transportation safeguards (requiring handling and transportation in accordance with DOT requirements for potential pyrophoric, reactive and oil-present materials); (iii) proper management under the Clean Air Act (for the often present benzene ); and (iv) the other specific conditions outlined in VPRA's request for a specific conditional exclusion. (*See* Attachment A). These specific conditions should be clearly stated in the regulation and applied to all spent catalyst reclaimed – whether under the control of the generator (regardless of whether processed on site or off site, or managed directly by the generator or by a third party or tolling contractor) or transferred for reclamation.

## Conclusion

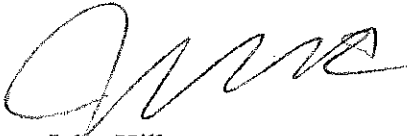
Irrespective of EPA's rationale for a "dual track" regulation of hazardous waste reclamation generally, it clearly is a bad idea for spent catalyst. Fortunately, EPA recognized some time ago that spent catalyst (K171/K172) is a highly specialized group of materials presenting a unique set of hazards. EPA has also recognized that standards pertaining to proper spent catalyst reclamation are particularly suited to specific rules tailored to the material's unique properties. In this regard, VPRA believes it is most appropriate (as VPRA has proposed) for EPA to adopt a set of specific regulations that focus on the proper handling, shipping and storage of spent catalyst based on its unique properties and risks. Furthermore, the products of spent catalyst reclamation - alumina, vanadium, molybdenum, cobalt, nickel - are all readily sold on the open metals market, subject to world-wide pricing wholly outside the control of the refiner-generator or the reclaimer-seller. EPA understands that little or no incentive to recycle is needed where refiners are sharing in the profitable sales of these products; however, when refiners are paying the reclaimer to take and recycle catalyst, the refiner is easily tempted to dispose of the material in a landfill instead, which can be cheaper than legitimate recycling. In order to avoid such disincentives to legitimate reclamation, EPA needs to establish a specific regulatory exclusion that establishes consistent and uniform regulatory requirements for the proper and legitimate reclamation of spent catalysts regardless of who controls the reclamation, which also limits the regulatory burdens for such reclamation to only those requirements needed for safe management. VPRA's specific conditional exclusion proposal does just that, and we urge the Agency to finalize its work on this tailored specific exclusion rather than expand the scope of the generic DSW exclusions for reclamation of hazardous secondary materials to cover spent catalysts. VPRA respectfully requests that EPA proceed forthwith to propose a rule that (1) sets specific

Vanadium Producers and Reclaimers Association  
Re: Docket ID No. EPA-HQ-RCRA 2010-0742  
2011 Definition of Solid Waste Proposed Rule  
October 20, 2011

standards for spent catalyst reclamation, as proposed by VPRA, and (2) corrects the LDR for K171/172 so that in the event (rare, we hope) a refiner sends its spent catalyst to a landfill, protective treatment standards are in place.

Should you have any comments or questions concerning these comments, please do not hesitate to contact me at 202-842-3204 or [jhilbert@khaconsultants.com](mailto:jhilbert@khaconsultants.com).

Sincerely,



John Hilbert  
President

cc: Office of Information and Regulatory Affairs  
Office of Management and Budget (OMB)  
Attn: Desk Officer for EPA  
725 17th St.  
Washington DC 20503.